

**REMARKS**

This Amendment, submitted in response to the Office Action June 22, 2005, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claims 1-19 remain pending in the application. Claims 16-19 have been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Applicant submits that the subject matter of these claims is supported by Fig. 5 of the originally filed application. Applicant hereinabove amends the specification to conform the specification with the original drawings. No new matter is added. The Examiner has not set forth a prior art rejection of claims 16-19, and therefore, Applicant submits that these claims should be deemed allowable. Should any new rejections be made against claims 16-19, the rejection must be made on a non-final basis.

Claims 1, 5, 9 and 13-14 have been rejected under 35 U.S.C. § 103 as being unpatentable over Applicant's Admitted Prior Art (JP 2001-266231, hereafter "AAPA") in view of Tomita (U.S.P. 4,237,384, hereafter "Tomita"). Claims 2, 6, 10, and 15 have been rejected under 35 U.S.C. § 103 as being unpatentable over the AAPA in view of Tomita and further in view of Schwarz (U.S.P. 5,946,156, hereafter "Schwarz"). Claims 3, 7, and 11 have been rejected under 35 U.S.C. § 103 as being unpatentable over the AAPA in view of Tomita and further in view of Richard. Claims 4, 8, and 12 have been rejected under 35 U.S.C. § 103 as being unpatentable over the AAPA in view of Tomita in view of Schwarz and further in view of Richard. Applicant respectfully submits the following arguments in traversal of the prior art rejections.

Applicant's invention relates to a servo detection apparatus that is able to provide accurate detection in a time-efficient manner. Detailed descriptions of the background, including the teachings of the AAPA, and an exemplary embodiment of the invention are set forth in the April 11, 2005 Amendment at pages 6-7. The Examiner is referred to these descriptions.

Further to these descriptions, a feature of the invention is that the reproducing head vibrates in range of the width of the servo track. Accordingly, all areas of the track can be detected.

Turning to the newly cited art, Tomita relates to a servo tracking system to accommodate for large servo track deviations. Known servo tracking include scanning recording tracks by rotary heads held via piezo-electric elements which displace deflectingly in a lateral direction of recorded tracks. Control signals to track the heads to the servo signals are obtained by vibrating the heads, referred to as wobbling. Col. 1, lines 35-51. In such situations, the amount of tracking error is limited to a range  $T_w$ , corresponding to the wobbling frequency. Col. 2, lines 24-27. The amount of oscillatory movement in relation to a recorded track is shown by Fig. 1. Tomita further teaches that increasing the wobbling amount to widen the extent of tracking control leads to increased jitter and chroma color shading. Col. 3, lines 1-3. In order to expand the extent of tracking control, Tomita teaches detecting of an envelop of RF signals of the rotating heads. The detected envelope is passed to a band-pass filter, which in turn is supplied to an integration and added to adjust for swings of the head position that extend beyond  $T_w$ . Col. 4, lines 23-45.

The Examiner contends that the AAPA and Tomita teach or suggest each feature of claim 1. The Examiner correctly concedes that the AAPA does not teach controlling the reproducing

head to vibrate in a range of width of the servo track. The Examiner cites Tomita to make up for this deficiency. Applicant submits that the rejection is not supported for the following reasons.

First, contrary to the Examiner's contention, Tomita does not disclose a vibration movement in a range of a width of the servo track. Referring to Fig. 1, the amount of scan deviation is smaller than that corresponding to the width of the shown track T. The specification does not particularly describe this as a servo track. Even assuming *arguendo* that track T corresponds to a servo track, the relative amount of the vibration and width of servo track is not taught. The Examiner relies on col. 4, lines 4-10 and col. 5, lines 1-10 to teach these features. While the cited portions describe vibration in a width direction, the extent of vibration need not be the range of the width of the servo track as described in claim 1.

Second, the Examiner's proffered reason for combining aspect of the AAPA and Tomita does not result in the features of claim 1. The Examiner contends that it would be obvious to modify the AAPA in view of Tomita to enhance the capability of the tracking servo loop and providing a small amount of wobbling to reduce jitter. The jitter reduction is not produced by expanding vibratory movement of a head to a range of the width of the track. Rather, the jitter reduction is provided by a voltage shift of the track in the event of a large deviation that exceeds  $T_w$ .

Third, referring to Fig. 1 of Tomita, it is apparent from T and R that a head can run off the track. By head of the present application can detect defects of a servo signal, whereas the conditions (A2, B2, C2, D2) in Tomita cannot detect such defects. Therefore, claim 1 is patentable for all the above reasons.

AMENDMENT UNDER 37 C.F.R. § 1.111  
Appln. No.: 10/687,696

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Because independent claim 13 includes analogous, though not necessarily coextensive features as claim 1, claim 13 is patentable for the reasons set forth above.

Because claims 2-12 and 14-19 are dependent upon claims 1 and 13, these claims are patentable for the reasons set forth above. It is noted that none of the additional references of Schwarz and Richard make up for the above deficiencies.

Applicant adds claims 20-21 to describe the invention more particularly.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

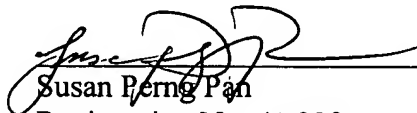
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**23373**

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